

Claims

1 In an infant milk formulation wherein the improvement comprises
liposomes in amounts to enhance nutritional delivery of nutrients, stabilize
5 ingredients, and enhance the bioavailability of ingredients.

2. The infant formulation of claim 1 wherein liposomes include natural,
bilayer forming lipids selected from glycerolphospholipids, glyceroglycolipids,
10 sphingophospholipids, sphingoglycolipids or mixtures thereof.

3. The infant formulation of claim 1 wherein the lipid concentration are in
the range of 0.1-50% of the formulation.

4. The infant formulation of claim 1 wherein the liposomes have a typical
15 size range between about 20nm and about 500nm.

5. The infant formulation of claim 1 wherein the liposome additionally
include in concentrations of 0.05-30% cholesterol, stigmasterol or mixtures thereof to
enhance the stability of the liposome membrane.

6. The infant formulation of claim 1 is an emulsions of edible oils in an
aqueous solution.

7. The infant formulation of claim 1 additionally contains stabilizers,
25 such as carrageenan.

8. The infant formulation of claim 6 wherein bilayer forming lipids
assemble into liposomes which act as emulsifiers and stabilize the solution in the
absence of carrageenan or other emulsifiers.

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9 The infant formulation of claim 1 additionally includes nutrients, vitamins, immunoglobulins and proteins.

5 10. The infant formulation of claim 1 has the same concentration of phospholipid that occurs in human milk

10 11. The infant formulation of claim 1 has purified phospholipids from soy (Phospholipon 90H, Natterman Phospholipid, Cologne, Germany) the liposomes entrap thereby sequestering the respective encapsulates and preventing oxidation of the lipids.

12. The infant formulation of claim 1 wherein the nutrients are thiamine HCl and ferrous sulfate.

15 13. A process for preparing infant formula comprising,

- a) encapsulating nutrients, vitamins, immunoglobulins, proteins or mixtures thereof into liposomes,
 - b) dehydrating the liposomes,
 - c) combining the dehydrated liposomes with dry whey powder and other
- 20 ingredients to make powder infant formula.

25 14. A process for preparing infant formula of claim 13 further comprising, adding the powdered formula to water and stirring under conditions wherein the liposomes reform forming a liposomal dispersion.

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